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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/595,660  
Filing Date: June 16, 2000  
Appellant(s): TELLER ET AL.

**MAILED**

**OCT 09 2007**

**GROUP 3600**

John A. Monocello III  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 15 June 2007, appealing from the Office action  
mailed 13 March 2006

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**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

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**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

- |                   |               |        |
|-------------------|---------------|--------|
| 1. 6, 790, 178 B1 | Mault, et al. | 9-2004 |
| 2. 5, 913, 310 A  | Brown         | 6-1999 |

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 104-121, 124-127, 137-152, 161-164, 167, 171-172, 175-182 are rejected under 35 U.S.C. 102(e).

Claims 122-123 are rejected under 35 U.S.C. 103(a).

These rejections are set forth in prior Office Action, Paper No 03022006 and reproduced hereinbelow. The rejections which appear below substantially repeat the rejections made in the previous Office Action (Paper Number 03022006). The text of those sections of Title 35 U.S. Code relied upon in the Examiner's Answer is set forth in the previous Office action, Paper Number 03022006.

1. Claims 104-121, 124-127, 137-152, 161-164, 167, 171-172, 175-182 are rejected under 35 U.S.C. 102(e) as being anticipated by Mault, et al., U.S. Patent Number 6, 790, 178.

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(A) As per claim 104, Mault teaches a method for assisting an individual to monitor, control and modify certain aspects of the individual's physiological status according to a preset physiological status goal, said individual wearing a wearable physiological monitoring device, the method comprising:

establishing said physiological status goal according to certain physiological parameters of said individual (Mault; column 6, line 61 to column 7, line 11);

generating data with said wearable device, said generated data indicative of a first parameter of said individual wearing said wearable physiological monitoring device (Mault; column 5, lines 56-65, column 6, lines 14-29);

generating data indicative of a second parameter of said individual with at least one of said wearable device and a second device (Mault; column 5, lines 56-65, column 6, lines 14-29);

receiving data related to the life activities of said individual (Mault; column 13, lines 40-42, column 20, lines 10-36);

calculating, from said first and second parameters, quantitative status information indicative of "how the person's performance compares to their goals" (reads on "the relative degree of achievement of said individual's performance with relation to said physiological status goal" (Mault; column 6, line 61 to column 7, line 11); Examiner interprets Mault's teachings of "measure their performance" to be a form of "calculating, from said first and second parameters, quantitative status information;"

generating individual status information relating to the status of said individual from said life activities data (Mault; column 12 lines 13-16, column 20, lines 55-67); and

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communicating to a recipient said “feedback” (reads on “calculated quantitative status information regarding said individual and said individual status information”) (Mault; column 7, lines 23-24),

wherein said first and second parameters are produced by at least one of said individual’s body and the environment adjacent said individual’s body (Mault; column 5, lines 56-65, column 6, lines 14-29, column 12, lines 22-24).

(B) As per claim 124, Mault teaches a method for assisting an individual to monitor, control and modify certain aspects of the individual’s physiological status according to a preset physiological status goal, said individual wearing a wearable physiological monitoring device the method comprising:

establishing said physiological status goal according to certain physiological parameters of said individual (Mault; column 6, line 61 to column 7, line 11);

generating data with said wearable device, said generated data indicative of a first parameter of said individual wearing said wearable physiological monitoring device (Mault; column 5, lines 56-65, column 6, lines 14-29);

generating data indicative of a second parameter of said individual with at least one of said wearable device and a second device (Mault; column 5, lines 56-65, column 6, lines 14-29);

calculating, directly from said first and second parameters, quantitative status information indicative of “how the person’s performance compares to their goals” (reads on “the relative degree of achievement of said individual’s performance with relation to said physiological status goal”) (Mault; column 6, line 61 to column 7, line 11); Examiner interprets “measure their

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performance” to be a form “of calculating, directly from said first and second parameters, quantitative status information;” and

communicating to a recipient said calculated quantitative status information indicative of a suggested change in said individual’s performance to assist said individual in the achievement of said physiological status goal (Mault; column 6, line 61 to column 7, line 9), Examiner interprets Mault’s teaching of “the software may then prompt the user ... walk or run a certain distance” to be a form of “communicating to a recipient said calculated quantitative status information,”

wherein said first and second parameters are produced by at least one of said individual’s body and the environment adjacent said individual’s body (Mault; column 5, lines 56-65, column 6, lines 14-29, column 12, lines 22-24).

(C) As per claims 105-108, Mault teaches a method as analyzed and discussed in claim 104 above

wherein said physiological status goal comprises a plurality of categories (Mault; column 6, line 35 to column 7, line 26);

wherein said quantitative status information is determined and provided with respect to each of said categories (Mault; column 6, line 35 to column 7, line 26);

wherein said categories relate to two or more of nutrition or diet, activity level or exercise, mind centering or psychological parameters, sleep, and daily activities (Mault; column 6, line 35 to column 7, line 26, column 13, lines 40-42, column 20, lines 10-36); and

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wherein said communicating step comprises providing at least a portion of said quantitative status information in graphical form (Mault; Figure 12, column 7, lines 23-24, column 11, lines 9-11).

(D) As per claims 109-113, 117-118, 125-127, 137-138, 142-143, Mault teaches a method as analyzed and discussed in claims 104 and 124 above

wherein at least two sensors selected from the group consisting of physiological sensors and contextual sensors are in electrical communication with at least one of said wearable device and said second device, said sensors generating said data indicative of a first parameter and said data indicative of a second parameter of said individual (Mault; column 4, lines 48-51, column 6, lines 14-29);

further comprising generating derived data based on said data indicative of a first parameter and said data indicative of a second parameter of said individual (Mault; column 12, lines 13-24); and

further comprising the additional step of using at least said derived data to determine said quantitative status information (Mault; column 6, line 61 to column 7, line 11, column 12, lines 13-24); Examiner interprets “the PDA stores exercise information received from the pedometer module and calculates various exercise parameters such as calories burned, distance covered, average speed, etc. The PDA may use this information for a variety of purposes, such as feedback to the user” (Mault; column 12, lines 14-19) together with Mault’s teachings of “[t]he person uses a pedometer module ... [...] ... [t]his data is ... [...]... used by the software to determine how the person's performance compares to their goals” (Mault; column 7, lines 1-6).



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to be a form of “using at least said derived data to determine said quantitative status information;”

said at least two sensors being chosen from the group consisting of respiration sensors, temperature sensors, heat flux sensors, body conductance sensors, body resistance sensors, body potential sensors, brain activity sensors, blood pressure sensors, body impedance sensors, body motion sensors, oxygen consumption sensors, body chemistry sensors, body position sensors, body pressure sensors, light absorption sensors, piezoelectric sensors, electrochemical sensors, strain gauges, and optical sensors (Mault; column 11, lines 52-57, column 17, lines 44-47); and

said at least two sensors being two of a body motion sensor adapted to generate data indicative of motion, a skin conductance sensor adapted to generate data indicative of the resistance of said individual's skin to electric current, a heat flux sensor adapted to generate data indicative of heat flow, a body potential sensor adapted to generate data indicative of heart beats or muscle or brain activity of said individual, and a temperature sensor adapted to generate data indicative of a temperature of said individual's skin said data indicative of a first parameter and said data indicative of a second parameter comprising at least two of said data indicative of motion said data indicative of resistance of said individual's skin to electric current, said data indicative of heat flow, said data indicative of heart beats or muscle or brain activity and said data indicative of a temperature of said individual's skin (Mault; column 11, lines 52-57, column 17, lines 44-47).

(E) As per claims 114-116, 119-121, 139-141, 144-148, 150-151, Mault teaches a method as analyzed and discussed in claims 104 and 124 above

wherein said derived data comprises data relating to at least one of activity level, sleep, nutrition, stress level and relaxation level (Mault; column 20, lines 24-25, 30-36);

said at least two sensors being said body motion sensor (Mault; column 11, lines 52-57, column 12, lines 14-16) and said "temperature sensor" (reads on "heat flux sensor") (Mault; column 20, lines 7-11), wherein said derived data and said one or more measured parameters comprises data relating to calories burned and is generated using at least said data indicative of motion and said data indicative of heat flow (Mault; column 12, lines 14-16, column 20, lines 10-11);

said at least two sensors comprising at least one said skin conductance sensor, generating data indicative of the resistance of said individual's skin to electric current (Mault; column 15, lines 52-61);

said at least two sensors comprising a body motion sensor (Mault; column 11, lines 52-57, column 12, lines 14-16) and skin conductance sensor (Mault; column 15, lines 52-61), wherein said derived data comprises data relating to calories burned, wherein said data relating to calories burned is generated using at least said data indicative of motion and said data indicative of resistance of said individual's skin to electric current (Mault; column 12, lines 14-16, column 15, line 52 to column 16, line 26, column 20, lines 7-11);

said wearable physiological monitoring device being part of an armband (Mault; column 17, lines 55-60); and

said wearable physiological monitoring device being part of a garment (Mault; column 17, lines 55-60).

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(F) As per claims 149, 152, 161-164, 167, 171-172 Mault teaches a method as analyzed and discussed in claims 104 and 124 above

said wearable physiological monitoring device having at least two sensors, said at least two sensors being two of a body motion sensor adapted to generate data indicative of motion (Mault; column 11, lines 52-57, column 12, lines 14-16), a skin conductance sensor adapted to generate data indicative of the resistance of said individual's skin to electric current, a heat flux sensor adapted to generate data indicative of heat flow, a body potential sensor adapted to generate data indicative of heart beats or muscle or brain activity of said individual, a temperature sensor adapted to generate data indicative of a temperature of said individual's skin (Mault; column 17, lines 44-47), an impedance sensor adapted to generate data indicative of an impedance of said individual's body, and a pulse rate sensor adapted to generate data indicative of a pulse rate of said individual (Mault; column 19, line 62 to column 20, line 7), said physiological monitoring device generating at least two of said data indicative of motion, said data indicative of resistance of said individual's skin to electric current, said data indicative of heat flow, said data indicative of heart beats or muscle or brain activity, said data indicative of a temperature of said individual's skin, said data indicative of impedance, and said data indicative of pulse rate when worn by said individual; said data indicative of a first parameter and said data indicative of a second parameter being generated using said at least two of said data indicative of motion, said data indicative of resistance of said individual's skin to electric current, said data indicative of heat flow, said data indicative of heart beats or muscle or brain activity, said data indicative of a temperature of said individual's skin, said data indicative of impedance, and said

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data indicative of pulse rate (Mault; column 11, lines 52-57, column 12, lines 14-16, column 17, lines 44-47, column 19, line 62 to column 20, line 7);

said at least two sensors being said body motion sensor (Mault; column 11, lines 52-57, column 12, lines 14-16) and said body potential sensor (Mault; column 6, lines 14-29, column 13, lines 57-63), wherein said derived data comprises data relating to calories burned and is generated using at least said data indicative of motion and said data indicative of heart beats (Mault; column 12, lines 14-16, column 14, lines 50-67, column 20, lines 7-11);

further comprising receiving sensor data from one or more sensor devices, said one or more sensor devices measuring said sensor data from the individual, and using said sensor data in addition to said data indicative of a first parameter and said data indicative of a second parameter to calculate said quantitative status information (Mault; column 6, line 61 to column 7, line 11, column 12 lines 13-24, column 20, lines 55-67); Examiner interprets “the PDA stores exercise information received from the pedometer module and calculates various exercise parameters such as calories burned, distance covered, average speed, etc. The PDA may use this information for a variety of purposes, such as feedback to the user” (Mault; column 12, lines 14-19) together with Mault’s teachings of “[t]he person uses a pedometer module ... [...] ... [t]his data is ... [...]... used by the software to determine how the person's performance compares to their goals” (Mault; column 7, lines 1-6) to be a form of “using said sensor data in addition to said data indicative of a first parameter and said data indicative of a second parameter to calculate said quantitative status information;”

further comprising the step of generating “various exercise parameters such as calories burned” (reads on “derived data”) from “exercise information received from the pedometer”

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(reads on “at least one of said data indicative of a first parameter and said data indicative of a second parameter”) (Mault; column 12, lines 14-19), wherein said quantitative status information indicative of the relative degree of achievement of said individual's performance with relation to said physiological status goal is calculated from at least said derived data; Examiner interprets Mault's teachings of “[t]he person uses a pedometer module ... [...] ... [t]his data is ... [...]... used by the software to determine how the person's performance compares to their goals” (Mault; column 7, lines 1-6) to be a form of “wherein said quantitative status information indicative of the relative degree of achievement of said individual's performance with relation to said physiological status goal is calculated from at least said derived data.”

(G) As per claims 175-182, Mault teaches a method as analyzed and discussed in claims 104 and 124 above

wherein said step of calculating, from said first and second parameters, quantitative status information indicative of the “how the person's performance compares to their goals” (reads on “relative degree of achievement of said individual's performance with relation to said physiological status goal” (Mault; column 6, line 61 to column 7, line 11) further comprises using said life activities data in said calculation (Mault; column 12 lines 13-16, column 20, lines 29-36, 55-67); Examiner interprets “measure their performance” to be a form of “calculating, from said first and second parameters, quantitative status information;”

further comprising the step of receiving data related to said individual's life activities of (Mault; column 13, lines 40-42, column 20, lines 10-36) and wherein said step of calculating, from said first and second parameters, quantitative status information indicative of the “how the

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person's performance compares to their goals" (reads on "relative degree of achievement of said individual's performance with relation to said physiological status goal" (Mault; column 6, line 61 to column 7, line 11) further comprises using said life activities data in said calculation (Mault; column 12 lines 13-16, column 20, lines 29-36, 55-67); Examiner interprets "measure their performance" to be a form of "calculating, from said first and second parameters, quantitative status information;"

further comprising the step of transmitting or commutating said data indicative of said first and second parameters to a "remote server" (reads on "central monitoring unit"), and wherein said step of "analyzing the data received" (reads on "calculating, from said first and second parameters"), quantitative status information indicative of the "how the person's performance compares to their goals" (reads on "relative degree of achievement of said individual's performance with relation to said physiological status goal" (Mault; column 6, line 61 to column 7, line 11) is performed by said central monitoring unit (Mault; column 7, lines 13-20); Examiner interprets Mault's teachings of "[t]he remote server may store and analyze the data received from the PDA and provide feedback based on the information" to teach "is performed by said central monitoring unit" and Examiner interprets Applicant's recital of "commutating" to mean "transmitting," and not to mean reversing of mathematical operations or forming a unidirectional current in a motor, standard definitions of this term, which do not appear to fit logically into the context of the claim;

said data indicative of a first parameter and said data indicative of a second parameter comprising at least two of data indicative of resistance of said individual's skin to electric current, data indicative of heat flow of said individual, data indicative said individual's brain

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activity, data indicative of a temperature of said individual's skin, data indicative of impedance of said individual, data indicative of said individual's respiration, data indicative of said individual's body conductance, data indicative of said individual's body resistance, data indicative of said individual's body potential, data indicative of said individual's blood pressure, data indicative of said individual's oxygen consumption, data indicative of said individual's body chemistry sensors, data indicative of said individual's body position sensors (Mault; column 4, lines 15-21, column 6, lines 14-29, column 19, line 62 to column 20, line 7); and

wherein said life activities are manually entered (Mault; Figure 13, Item 136, column 15, lines 26-27, column 16, lines 19-22).

2. Claims 122-123 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mault, et al., U.S. Patent Number 6, 790, 178 as applied to claim 104 above, and further in view of Brown et al, U.S. Patent Number 5, 913, 310.

(A) As per claims 122-123, Mault teaches a method as analyzed and discussed in claim 104 above.

Mault fails to explicitly disclose a method further comprising the steps of aggregating at least one of said data indicative of a first parameter of said individual, said data indicative of a second parameter of said individual, and said quantitative status information with data collected from a plurality of individuals to create aggregate data; and

further comprising the step of creating reports based on said aggregate data.

However, the above features are well-known in the art, as evidenced by Brown.

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In particular, Brown teaches a method further comprising the step of aggregating at least one of said data indicative of a first parameter of said individual, said data indicative of a second parameter of said individual, and said quantitative status information with data collected from a plurality of individuals to create aggregate data (Brown; column 26, lines 45-50, column 20, lines 35-45); and

further comprising the step of creating reports based on said aggregate data (Brown; column 20, lines 35-45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Mault to include these limitations, as taught by Brown, with the motivations of statistically analyzing the data for use in epidemiological research (Brown; column 20, lines 35-45).

#### **(10) Response to Argument**

In the Appeal Brief filed 15 June 2007, Appellant makes the following argument:

### **(VII) ARGUMENT**

#### **A. Introduction**

**B. Mault, et al., U.S. Patent Number 6, 790, 178 ("Mault") fail to anticipate claims 104-121, 124-127, 137-152, 161-164, 167, 171-172, 175-182 the under 35 U.S.C. 102(e).**



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1. A brief description of Mault
2. Claims 104-109, 147-149, 167, 179, and 181
3. Claims 110-114, 117-119, 171, and 177
4. Claims 115 and 120
5. Claims 116 and 121
6. Claims 124, 125, 150-152, 172, 176, 178, 180, and 182
7. Claims 126, 127, 137-139, and 142-144
8. Claims 140 and 145
9. Claims 141 and 146
10. Claims 161-164

**C. Mault in view of Brown et al., U.S. Patent Number 5, 913, 310**

**(“Brown”) fail to render claims 122 and 123 obvious under 35 USC § 103.**

Examiner will address Appellant's arguments in sequence as they appear in the brief.

## (VII) ARGUMENT

### A. Introduction

In response to Appellant's listing of the prosecution history of the instant application, Examiner thanks Appellant for this review. However, contrary to Appellant's assertions that "[w]ithin the past several months, Applicants have had to contend with a new volley of references," Examiner respectfully notes that the application of prior art references, throughout the prosecution history of this application, has not been arbitrary, but has been in response to amendments to the claims as well as to Attorney's explanations and clarifications of claimed limitations.

In response to Appellant's referral in the next to last line on page 9 of the Appeal Brief to "three more references to consider," Examiner notes that in the Interview Summary detailing the interviews of May 2005 (paper number 05242005) these references are noted as follows: "In addition, Examiner provided Applicant with three references, namely Amano (5914837), Hisano(6808473), and Fitch (5730140), that appear to be applicable in analysis of Applicant's invention, and it was suggested that further drafting of claim language to might be made with these references in mind, however an updated, more focused search, which might find more relevant references, would be done once the claim language became of record" (emphasis added). Examiner notes that although Examiner mentioned three references in the interview that appeared to be applicable, only one of these references, Amano, was ever applied. Examiner notes that subsequently, in response to amended claim limitations, Amano was removed as a reference.

**B. Mault, et al., U.S. Patent Number 6, 790, 178 (“Mault”) fail to anticipate claims 104-121, 124-127, 137-152, 161-164, 167, 171-172, 175-182 the under 35 U.S.C. 102(e).**

1. A brief description of Mault

In response to Appellant’s review of the Mault reference, Examiner respectfully thanks Appellant for this review. Examiner’s responses to the details of Appellant’s arguments that the Mault invention is not concerned with “providing actionable, analytical information to an individual ... [...] ... parameters,” as detailed by Appellant against the Mault reference, follow.

2. Claims 104-109, 147-149, 167, 179, and 181

With respect to Appellant’s argument in pages 12-14 of the Appeal Brief that the Mault reference fails to teach the limitation recited in claim 1 of “calculating, from said first and second parameters, quantitative status information indicative of the relative degree of achievement of said individual's performance with relation to said physiological status goal”, Examiner respectfully disagrees. Examiner interprets Mault’s teachings of

“physiological monitor measures one or more physiological parameters and stores the resulting data to memory. Optionally, the monitor may have onboard data processing [reads on “calculating”] and/or display. At a later time, the physiological monitor may be interconnected with, or otherwise placed in communication with, a PDA so that data may be transferred from the monitor to the PDA. The PDA may enable additional

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functionality or provide processing [reads on “calculating”] and display of physiological data” (emphasis added) (Mault; column 5, lines 25-33),

together with Mault’s teachings of

“the PDA preferably stores testing data from one or more physiological monitor modules to allow the use of data in health and fitness tracking as well as in a variety of software applications. In another embodiment of the present invention, the physiological monitor modules include storage means such as memory for storing data from one or more sensors. Either during or after the test, the data from the storage means is transferred to the PDA for processing, display, and storage (Mault; column 2, lines 51-60),

together with Mault’s teachings of

“the PDA stores exercise information received from the pedometer module and calculates various exercise parameters such as calories burned, distance covered, average speed, etc. The PDA may use this information for a variety of purposes, such as feedback to the user” (emphasis added) (Mault; column 12, lines 14-19),

and Mault’s teachings of

“[t]he person uses a pedometer module ... [...] ... [t]his data is ... [...]... used by the software to determine [reads on “calculate”] how the person’s performance compares to their goals [reads on “quantitative status information indicative of the relative degree of achievement of said individual’s performance with relation to said physiological status goal”]. As part of the health or fitness management program, it may be preferable to track other factors such as blood pressure, heart rate, or blood glucose. The PDA may also prompt the user to measure these parameters at appropriate times. The user may then insert the appropriate module into the PDA, perform the appropriate test, and have the data automatically transferred into the program” (Mault; column 7, lines 1-11),

together with Mault’s teachings of

“almost any type of physiological monitor may be incorporated into the present invention. Examples of physiological monitors, which will be described in more detail below, include a calorimeter module for measuring metabolic rate, a spirometer module for measure breath flow and volume, a pedometer module for measuring motion, a heart rate, an EKG/heart sound module, or a pulse oximeter for measuring cardiac-related parameters, a body fat module, a blood pressure module, a body temperature module, a blood glucose module, an ultrasonic sensor for measuring respiration, pregnancy-related factors, bone density, or posture, a food or body weight module, and others” (Mault; column 6, lines 14-29)

to teach a form of “calculating, from said first and second parameters, quantitative status information indicative of the relative degree of achievement of said individual's performance with relation to said physiological status goal.”

As per Appellant's argument in the last paragraph on page 13 of the Appeal Brief that “Mault does not disclose any quantitative status information indicative of the relative degree of achievement,” and that “there is no mention of degrees of achievement,” Examiner notes that the physiological monitors described above yield quantitative status information, and also that, as noted above, the software determines or calculates “how the person's performance compares to their goals.” Examiner interprets these teachings to teach the argued limitation.

As per Appellant's argument in the last paragraph on page 13 of the Appeal Brief that in the Mault reference “the information is not calculated from two parameters,” Examiner respectfully disagrees, and notes that, as described above, Mault teaches “physiological monitor measures one or more physiological parameters and stores the resulting data to memory ... [...] ... provide processing [reads on “calculating”] and display of physiological data” (emphasis

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added) (Mault; column 5, lines 25-33) and “data is used by the software to determine [reads on “calculate”] how the person's performance compares to their goals [reads on “quantitative status information indicative of the relative degree of achievement of said individual's performance with relation to said physiological status goal”]. As part of the health or fitness management program, it may be preferable to track other factors [reads on “parameters”] such as blood pressure, heart rate, or blood glucose. The PDA may also prompt the user to measure these parameters at appropriate times. The user may then insert the appropriate module into the PDA, perform the appropriate test, and have the data automatically transferred into the program” (emphasis added) (Mault; column 7, lines 1-11) and Examiner also notes that, as described above, the software determines or calculates “how the person's performance compares to their goals.” Examiner interprets these teachings to teach the argued limitation. Moreover, Examiner notes that Applicant’s specification, although providing examples of “parameters” fails to explicitly define “parameters;” as such, Examiner is giving the term “parameters” its broadest reasonable interpretation.

In response to Appellant’s arguments at page 14 of the Appeal Brief regarding Mault’s utilization of more than one parameter, and lack of quantitative status information indicative of the relative degree of achievement, these arguments have been addressed previously in this Office Action.

3. Claims 110-114, 117-119, 171, and 177

As per Appellant’s argument on pages 15-16 of the Appeal Brief that the Mault reference fails to teach the limitation recited in claim 110 of “generating derived data based on

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said data indicative of a first parameter and said data indicative of a second parameter of said individual” and that the cited reference discloses calculations from only one parameter, Examiner respectfully disagrees. Further it is the entire applied reference, and not only the cited passages that must be considered when evaluating whether or not the applied reference teaches the cited limitations. Moreover, Examiner interprets Mault’s teachings of

“the PDA stores exercise information received from the pedometer module and calculates various exercise parameters [reads on “generating derived data”] such as calories burned, distance covered, average speed, etc. The PDA may use this information for a variety of purposes, such as feedback to the user, entry into an exercise log, or as part of an overall health or fitness program. As another alternative, the PDA may have a built in capability to measure acceleration or movement such that a pedometer module including an accelerometer is not necessary. Movement or acceleration may also be determined in other ways, such as using GPS signals ... [...] ... , cellular phone signals, radio telemetry, and other approaches [reads on “indicative of a first parameter and said data indicative of a second parameter of said individual”]. The hardware necessary for determination of acceleration or movement may be incorporated into a PDA or provided as a module that docks with or communicates with the PDA (emphasis added) (Mault; column 12, lines 13-29); (Examiner notes that the input parameters which are the source of the data are not only the pedometer data, but also the GPS data and the cellular phone signals and radio telemetry),

together with Mault’s teachings of

“The health management software may include the ability to set up a variety of fitness plans and to track adherence to the plans ... [...] ... The person uses a pedometer module, either on its own or mated with a PDA, to measure their performance during a run or walk. This data is transferred into the PDA and used by the software to determine how the person's performance compares to their goals. As part of the health or fitness

management program, it may be preferable to track other factors such as blood pressure, heart rate, or blood glucose. The PDA may also prompt the user to measure these parameters at appropriate times. The user may then insert the appropriate module into the PDA, perform the appropriate test, and have the data automatically transferred into the program (emphasis added) (Mault, column 6, line 62 to column 7, line 11)

to teach the argued limitations. Moreover, Examiner notes that Applicant's specification, although providing examples of "parameters" fails to explicitly define "parameters;" as such, Examiner is giving the term "parameters" its broadest reasonable interpretation.

As per Appellant's argument in lines 3-7 on page 16 of the Appeal Brief that the Mault reference fails to teach the limitation recited in claim 177 of transmitting or communicating or communicating "said data indicative of said first and second parameters to a central monitoring unit, wherein said step of calculating, from said first and second parameters, quantitative status information is performed by said central monitoring unit," Examiner respectfully disagrees. Examiner interprets Mault's teachings of "the PDA may include wireless communication capability such that it may wirelessly communicate, via the Internet or other means, with a remote server. The remote server may store and analyze [reads on "calculate"] the data received from the PDA and provide feedback based on the information" (emphasis added) (Mault; column 7, lines 15-20) to teach this limitation.

#### 4. Claims 115 and 120

As per Appellant's argument on pages 16-17 of the Appeal Brief that the Mault reference fails to teach the limitation recited in claim 115 of "said at least two sensors being said body



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motion sensor and said heat flux sensor, wherein said derived data and said one or more measured parameters comprises data relating to calories burned and is generated using at least said data indicative of motion and said data indicative of heat flow,” Examiner respectfully disagrees. Examiner interprets Mault’s teachings of “detecting motion” (Mault; column 11, lines 52-57) and “ ... [...] ... the PDA stores exercise information received from the pedometer module and calculates various exercise parameters such as calories burned ... [...] ... ” (Mault; column 12, lines 14-16) to teach the recited “body motion sensor;” and Examiner interprets Mault’s teachings of

“[t]his invention relates to a physiological monitor for use in measuring a health characteristic of a user, such as metabolism, weight, body fat percentage, heart rate, EKG, blood pressure, blood oxygenation, body temperature or the like [reads on “heat flux sensor”], and an associated computing device which acts to receive, record, process, compute, display and/or transmit signals from the monitor” (emphasis added) (Mault; column 4, lines 15-21),

together with Mault’s teachings of

“As part of the system, caloric intake, resting metabolism, and activity-based metabolic expenditures are tracked. ... [...] ... The physiological monitors according to the various embodiments of the present invention preferably integrate with such a health management system. For example, data from a calorimeter module may be used to determine baseline caloric expenditure. This is a very important factor in dietary management. The PDA may periodically prompt the user to measure their resting metabolic rate using the calorimeter module. The data from the measurement is then automatically entered into the health management program. ... [...] ... the PDA may periodically wirelessly query various physiological monitors within its wireless

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transmission range in order to transfer data and to determine when each module was last used” (emphasis added) (Mault; column 6, lines 35-60),

and Mault’s teachings of

“The skin mounted monitor may also contain a temperature sensor, as body temperature and pulse rate together have been shown to correlate with metabolic rate, and hence are useful to record within a calorie management system. A micromachined activity sensor may also be included within the heart activity monitor, such a device would then be very useful within a physical fitness program, a cardiac rehabilitation program, a calorie management system, a weight loss program, a cardiac problem diagnosis scheme, or other medical or lifestyle related activity” (Mault; column 20, lines 7-15)

to teach the argued limitations.

As such, it is unclear as to how or why Appellant's claimed limitations are not met by at least the aforementioned passages. Perhaps Appellant is relying on features not expressly recited in the claims, but disclosed in the specification. However it has been held that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Moreover, on page 17, lines 4-5 of the Appeal Brief, Appellant points to citations in the specification that attempt to explain “data indicative of heat flow.” These references appear to use temperature as a measure of heat flow. For example, the referenced lines state that “Fig. 9 shows heat flow over a one-day period ... [...] ...” (Specification, page 31, lines 5-9); Examiner notes that as shown in Figure 9 the parameter “Temp” is being measured on the y-axis of the displayed chart, indicating that, according to Appellant’s specification, temperature is an indicator of heat flow. Furthermore, Examiner notes that Applicant’s specification, although

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listing “heat flow” among the physiological parameters, fails to explicitly define “data indicative of heat flow;” as such, Examiner is giving the term “data indicative of heat flow” its broadest reasonable interpretation.

As per Appellant’s argument in the paragraph bridging pages 17-18 of the Appeal Brief that “none of the passages cited by the examiner disclose the use of *data indicative of heat flow together* with *data indicative of motion* to derive calories burned,” Examiner respectfully disagrees. Further it is the entire applied reference, and not only the cited passages that must be considered when evaluating whether or not the applied reference teaches the cited limitations. Moreover, as discussed above, Examiner interprets Mault’s teachings of

“The skin mounted monitor may also contain a temperature sensor, as body temperature and pulse rate together have been shown to correlate with metabolic rate, and hence are useful to record within a calorie management system. A micromachined activity sensor may also be included within the heart activity monitor, such a device would then be very useful within a physical fitness program, a cardiac rehabilitation program, a calorie management system, a weight loss program, a cardiac problem diagnosis scheme, or other medical or lifestyle related activity” (emphasis added) (Mault; column 20, lines 7-15)

to teach the argued limitations.

##### 5. Claims 116 and 121

As per Appellant’s argument in the paragraph bridging pages 18-19 of the Appeal Brief that the Mault reference fails to teach the limitations recited in claims 116 and 121 of “said at

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least two sensors comprising at least one said skin conductance sensor, generating data indicative of the resistance of said individual's skin to electric current,” and that “Mault teaches away” from teaching this limitation, Examiner respectfully disagrees. Further it is the entire applied reference, and not only the cited passages that must be considered when evaluating whether or not the applied reference teaches the cited limitations. Examiner interprets Mault’s teachings of

“[a] constant current source is connected between the current electrode pair, for example electrodes 144 and 146, and an electric impedance measurement circuit is connected between the sensor electrode pair, for example 148 and 150. Impedance measurement, current source, and data transmission circuitry are contained within the housing 138 to measure bioimpedance [a measure of the opposition to the flow of the electric current through the tissues], and to transmit the data to the PDA ... [...] ... In another embodiment, the current electrodes are the pair 144 and 150, or (equivalently) the pair 148 and 146, so that the current electrodes connect to a finger and thumb of opposite hands ... [...] ... allows the dynamic interchanging of sensor and current electrodes to eliminate any effect of module orientation in the hand, or minor skin conductivity differences between the hands [reads on “generating data indicative of the resistance of said individual's skin to electric current”] (Mault; column 15, lines 44-61),

together with Mault’s teachings of

“[b]ody fat content, fat free mass, total body water, and body cell mass may be determined from the obtained bioimpedance data” ] (Mault; column 16, lines 39-41), and “[b]ioimpedance may also be used to determine other parameters” (Mault; column 17, lines 4-5) and “bioimpedance modules can be used to monitor blood pressure” (Mault; column 18, lines 35-37)

to teach a form of “said at least two sensors comprising at least one said skin conductance sensor, generating data indicative of the resistance of said individual's skin to electric current.”

6. Claims 124, 125, 150-152, 172, 176, 178, 180, and 182

As per Appellant's argument on pages 20-21 of the Appeal Brief that the Mault reference fails to teach the limitations recited in claim 124 of "communicating to a recipient said calculated quantitative status information indicative of a suggested change in said individual's performance," and that "notably, the Examiner does not even allege that Mault discloses the claimed step of ... [...] ...," Examiner respectfully disagrees. Further it is the entire applied reference, and not only the cited passages that must be considered when evaluating whether or not the applied reference teaches the cited limitations. In particular, Examiner interprets Mault's teachings of

"[t]he health management software may include the ability to set up a variety of fitness plans and to track adherence to the plans. ... [...] ... the software may then prompt the user ... walk or run a certain distance ... [...] ... The person uses a pedometer module, either on its own or mated with a PDA, to measure their performance during a run or walk. This data is transferred into the PDA and used by the software to determine how the person's performance compares to their goals [reads on "calculated quantitative status information indicative of a suggested change in said individual's performance"]. As part of the health or fitness management program, it may be preferable to track other factors such as blood pressure, heart rate, or blood glucose. The PDA may also prompt the user to measure these parameters at appropriate times. The user may then insert the appropriate module into the PDA, perform the appropriate test, and have the data automatically transferred into the program ... [...] ... As a further aspect of the health management software, it is preferred that the PDA communicates with remote computing devices and/or health professionals. For example, the PDA may include wireless communication capability such that it may wirelessly communicate, via the Internet or other means, with a remote server. The remote server may store and analyze the data

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received from the PDA and provide feedback based on the information. The information from the PDA may also be reviewed by a health professional or health management advisor so that feedback may be given. The feedback may be communicated back to the PDA or communicated to the user in other ways” (Mault; column 6, line 61 to column 7, line 24)

to be a form of “communicating to a recipient said calculated quantitative status information indicative of a suggested change in said individual’s performance.”

As per Appellant’s argument on lines 5-10 on page 20 of the Appeal Brief that the Mault reference fails to teach the limitations recited in claim 178, these issues have been discussed earlier in this Office Action.

7. Claims 126, 127, 137-139, and 142-144

In response to Appellant’s arguments at pages 21-22 of the Appeal Brief regarding limitations recited in claim 126, and Mault’s utilization of more than one parameter, these arguments have been addressed previously in this Office Action.

8. Claims 140 and 145

In response to Appellant’s arguments at pages 22-24 of the Appeal Brief regarding limitations recited in claim 140 and 145, and Mault’s disclosure related to “data indicative of motion” and “data indicative of heat flow,” and the relationship of data indicative of the measurement of heat flow to temperature, as disclosed in Appellant’s specification, these arguments have been addressed previously in this Office Action.

As per Appellant's argument in the paragraph bridging pages 23-24 of the Appeal Brief that "Mault does not disclose the use of data indicative of heat flow along with data indicative of motion to derive calories burned," these arguments have been addressed previously in this Office Action.

As per Appellant's argument in the paragraph bridging pages 23-24 of the Appeal Brief that "Mault ... [...] ... discusses determining calories burned from one parameter only: a pedometer," Examiner notes that this issue has been discussed earlier in this Office Action. Moreover, Examiner notes that Applicant's specification, although providing examples of "parameters" fails to explicitly define "parameters;" as such, Examiner is giving the term "parameters" its broadest reasonable interpretation.

9. Claims 141 and 146

As per Appellant's argument in the paragraph bridging pages 24-25 of the Appeal Brief that Mault does not disclose limitations recited in claims 141 and 146 of "said at least two sensors comprising a body motion sensor and skin conductance sensor wherein said derived data comprises data relating to calories burned," these arguments have been addressed previously in this Office Action.

In response to Appellant's assertions on page 25 of the Appeal Brief, that the Examiner utilizes improper hindsight reasoning, Examiner notes that so long as this reasoning takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the Appellant's

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disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170

USPQ 209 (CCPA 1971).

Consequently, it is respectfully submitted that contrary to Appellant's allegations, the features that Appellant disputes are clearly within the teachings of the applied reference and that Appellant fails to properly consider the clear and unmistakable teachings of the applied reference, as illustrated above.

10. Claims 161-164

As per Appellant's argument in the paragraph bridging pages 25-26 of the Appeal Brief that Mault does not disclose limitations recited in claims 161-164 of "wherein said derived data comprises data relating to calories burned and is generated using at least said data indicative of motion and said data indicative of heart beats," these arguments have been addressed previously in this Office Action.

Additionally, Examiner notes that Mault teaches:

"the PDA stores exercise information received from the pedometer module and calculates [reads on "derives"] various exercise parameters such as calories burned, distance covered, average speed, etc. The PDA may use this information for a variety of purposes, such as feedback to the user" (emphasis added) (Mault; column 12, lines 14-19); and

Mault also teaches:

"[t]his invention relates to a physiological monitor for use in measuring a health characteristic of a user, such as metabolism, weight, body fat percentage, heart rate, EKG, blood pressure, blood oxygenation, body temperature or the like, and an associated computing device which acts to receive, record, process, compute, display and/or



transmit signals from the monitor. The computing device may take any form, including portable computers such as personal digital assistances (PDAs) as well as non-portable computers. The portable computer category includes all portable devices with onboard computing capability, such as cellular telephones, electronic books, pagers, watches, and organizers. ... [...] ... The PDA need not be a unitary device, but instead the components could be distributed. As one example, the display could be incorporated in eyeglasses while the remainder is incorporated into a wristwatch. For ease of reference, the present application will refer primarily to PDAs, though all other computing devices may be used as well. The term "general purpose personnel digital assistant" will also be used herein. This refers to a PDA capable of running a variety of software that may be loaded into memory" (Mault; column 4, lines 15-38)

Examiner notes that "exercise information" received from a pedometer normally includes data indicative of motion. Examiner also notes that Mault's "physiological monitor" as described above also includes at least "heart rate" monitoring and "EKG" monitoring, and as such, interprets these teaching to include wherein said derived data comprises data relating to calories burned and is generated using at least said data indicative of motion and said data indicative of heart beats.

**C. Mault in view of Brown et al., U.S. Patent Number 5, 913, 310**

**("Brown") fail to render claims 122 and 123 obvious under 35 USC § 103.**

As a preliminary note, Examiner notes that the Brown reference has been erroneously referred to by Appellant as "Brown et al." rather than "Brown."

With respect to Appellant's argument in paragraph 1 of page 27 of the Appeal Brief that a *prima facie* case of obviousness has not been established and that "[t]eaching all of the claimed limitations is required to make out a *prima facie* case of obviousness," the Examiner respectfully submits that obviousness is determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Hedges*, 783 F.2d 1038, 1039, 228 USPQ 685,686 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785,788 (Fed. Cir. 1984); and *In re Rinehart*, 531 F.2d 1048, 1052, 189 USPQ 143,147 (CCPA 1976). Using this standard, the Examiner respectfully submits that the burden of presenting a *prima facie* case of obviousness has at least been satisfied, since evidence has been presented of corresponding claim elements in the prior art and the combinations and the motivations for combinations that fairly suggest Appellant's claimed invention (see above in present Office Action) have been expressly articulated.

In response to Appellant's argument in paragraph 2 of page 27 of the Appeal Brief that there is no suggestion to combine the references, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

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And modern case law has clearly and explicitly held that in order for the references to be combined the references need not explicitly teach or suggest every element of the combination as well as how to use such a combination. For example, the Court in *In re Fritch* stated "[The Examiner] can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. [emphasis added]" *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ 2d 1596, 1598 (Fed. Cir. 1988) (citing *In re Lalu*, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1988)). Each applied reference does not expressly suggest combination with the other respective references; however, the Examiner has shown that motivation for combining the references existed in the prior art. The "modification" referred to in *In re Fritch* involves extensive changes to the primary references. Such is not the case in the present combinations, where all modifications proposed by the Examiner are taught by the references and that knowledge generally available to one of ordinary skill in the art. Therefore, the combination of references is proper and the rejection maintained.

Furthermore, the Examiner recognizes that references cannot be arbitrarily altered or modified and that there must be some reason why one skilled in the art would be motivated to make the proposed modifications. And although the motivation or suggestion to make modifications must be articulated, it is respectfully submitted that there is no requirement that the motivation to make modifications must be expressly articulated within the references themselves. References are evaluated by what they suggest to one versed in the art, rather than by their specific disclosures, *In re Bozek*, 163 USPQ 545 (CCPA 1969).

In the instant case, however, the Examiner respectfully notes that each and every motivation to combine the applied references is accompanied by select portions of the respective reference(s) which specifically support that particular motivation. Note, for example the motivation for combining Mault and Brown, on page 16, paragraph 3 in the present Office Action, above, which states "...with the motivations of statistically analyzing the data ... [...] ... (Brown; column 20, lines 35-45)." As such, it is NOT seen that the Examiner's combination of references is unsupported by the applied prior art of record. Rather, it is respectfully submitted that explanation based on the logic and scientific reasoning of one ordinarily skilled in the art at the time of the invention that support a holding of obviousness has been adequately provided by the motivations and reasons indicated by the Examiner, *Ex parte Levengood* 28 USPQ 2d 1300 (Bd. Pat. App. & Inter., 4/22/93).

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

#### ***Conclusion***

Appellant's arguments at pages 9-27 of the Appeal brief submitted 15 June 2007 seem to indicate that Appellant's invention is merely a combination of old and well-known elements and do not appear to persuasively require a withdrawal of the Examiner's grounds of rejection. As specified in the remarks and rebuttals given above, Appellant's arguments apparently fail to appreciate the clear and unmistakable suggestions provided in the prior art of record. As such, it

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is respectfully submitted that an explanation based on logic and sound scientific reasoning of one ordinarily skilled in the art at the time of the invention that support a holding of anticipation and obviousness has been adequately provided by the motivations and reasons indicated by the Examiner both in the present Examiner's Answer as well as the previous Office Action (Paper Number 03022006), *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter., 4/22/93).

Thus, in light of the reasons and responses given above, it is respectfully submitted that both a *prima facie* case of anticipation and a *prima facie* case of obviousness have been clearly established by the Examiner.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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September 25, 2007

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